

EXHIBIT B



Academic Press Dictionary of Science and Technology

Edited by
Christopher Morris



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International Astronomical Union

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interorbital

International Astronomical Union *Astronomy*. the world organization of astronomers; it was founded in 1919 and holds meetings every two years.

International broadcasting *Telecommunications*. radio broadcasting for international public entertainment; frequencies used by this broadcasting service are usually between 5950 kilohertz and 21,750 kilohertz.

International Cable Code see MORSE CABLE CODE.

International call sign *Telecommunications*. a call sign assigned according to the rules of the International Telecommunication Union, which permits a receiver to identify a radio station; the nationality of the station is identified in the first character or the first two characters.

International candle *Optics*. a unit of luminous intensity, based on the luminous intensity of a group of carbon-filament lamps; has been replaced by candela.

International code signal see INTERNATIONAL SIGNAL CODE.

International Color System *Astronomy*. a now-obsolete system used for color photographic photometry of stars; it has been superseded by various photoelectric systems, chiefly among which is the UBV system.

International control frequency bands *Telecommunications*. in the United States, radio-frequency bands that are allocated to form links between stations used for international communication.

International control station *Telecommunications*. a fixed station connected with the international fixed public radio communications service.

International Date Line *Cartography*. a particular hypothetical line on the earth, coinciding basically with the 180° meridian but with deviations to avoid separating contiguous or nearby inhabited areas; separates neighboring time zones in which the date differs by one day.

International ellipsoid of reference *Geodesy*. a reference ellipsoid with a semimajor axis of approximately 6,387,388 meters, a semiminor axis of approximately 6,356,911.9 meters, and an ellipticity of 1/297.

International Geophysical Year *Geophysics*. the period between November 1, 1957, and December 31, 1958, during which international programs of geophysical explorations of the solar and terrestrial atmospheres were conducted.

International gravity formula *Geodesy*. a formula for determining theoretical gravity on the basis of the following assumptions: that the spheroid of reference is an exact ellipsoid of revolution, with the dimensions of the international ellipsoid of reference, rotating about its minor axis once a day; that the surface of the ellipsoid is level; and that gravity at the equator is 978.049 gals.

International henry *Electromagnetism*. an international unit of electrical inductance, equivalent to 1.00049 henry.

International Ice Patrol *Oceanography*. an organization that monitors and provides warnings of dangerous icebergs.

International index numbers *Meteorology*. an internationally recognized numbering system for designating meteorological observing stations; administered by the World Meteorological Organization.

International Morse Code see MORSE CODE.

International nautical mile see NAUTICAL MILE, def. 2.

International ohm *Electricity*. the standard unit of resistance, reactance, and impedance, represented by the Greek letter Ω , derived from the standard ampere; the resistance at 0°C of a column of mercury of uniform diameter that is 106.300 centimeters long and has a mass of 14.4521 grams, equivalent to 1.00049 ohms.

International Phonetic Alphabet see IPA.

International Polar Year *Meteorology*. a designation for the years 1882 and 1932, during which many countries participated in increased observations of geophysical and meteorological phenomena in the polar regions; the concept was continued and expanded in scope as the International Geophysical Year.

International Practical Temperature Scale *Thermodynamics*. a standard temperature scale defined on the basis of certain fixed and easily reproducible points that are assigned definite temperatures; the primary fixed-point temperatures in °C include the triple point of water (0.01); the normal boiling points of water (100) and oxygen (-182.692), and the normal freezing points of gold (1064.43) and silver (961.93).

International Quiet Sun Year *Geophysics*. an international program of solar observations carried out in 1964-1965, during the minimum of the eleven-year cycle of solar activity.

International radio silence *Telecommunications*. a three-minute period of radio silence during which distress signals from ships or aircraft are listened for by marine radio stations; transmissions occur 15 and 45 minutes after each hour on the frequency of 500 kilohertz.

International rules of the road *Navigation*. rules specifying the conduct of vessels in international waters, more formally referred to as the **International Regulations for Preventing Collisions at Sea**.

International signal code *Telecommunications*. a worldwide code used for international communication, employing sequences of letters instead of phrases, words, or sentences.

International spheroid see INTERNATIONAL ELLIPSOID OF REFERENCE.

International Standards Organization *Computer Technology*. an international agency responsible for establishing standards for information exchange.

International sunspot number see WOLF NUMBER.

International synoptic code *Meteorology*. a synoptic code administered by the World Meteorological Organization in which observable meteorological elements are encoded in five-digit word lengths for transmission from one weather station to another. Also, **SYNOPTIC CODE**.

International system of electrical units *Metrology*. an adoption of standard unit values for the ohm, ampere, centimeter, and second, used for measuring electrical and magnetic quantities from 1893 until 1948, when it was replaced by the Giorgi system.

International System of Units *Physics*. a unit system that is used worldwide and is based on the units of the meter, second, kilogram, ampere, kelvin, candela, and mole. (From the French *Système Internationale d'Unités*.)

International Temperature Scale see INTERNATIONAL PRACTICAL TEMPERATURE SCALE.

International thread *Design Engineering*. a standardized thread size in which pitch and diameter are related, thus giving the thread a rounded root and a flat crest.

International unit *Metrology*. any unit based on the International System of Units (SI).

International volt *Electricity*. the standard unit of electric potential, derived from the international ampere. It is the voltage that will produce a current of one international ampere through a resistance of one international ohm, equivalent to 1.00034 volts.

Internegative *Graphic Arts*. a black-and-white negative produced by rephotographing the image projected from a color transparency. Also, **interneg**.

Internet *Computer Technology*. 1. any network that connects other networks. 2. **Internet**. a large network of this type that covers the U.S. and extends to Canada, Europe, and Asia, providing connectivity between governments, universities, and corporate networks and hosts.

Internetworking *Computer Technology*. the technology of connecting multiple and diverse computer subnetworks. Also, **internetworking**.

Interneuron *Neurology*. any neuron located between the primary afferent neuron and the final output neuron in a neural chain.

Internides *Geology*. the interior of an orogenic belt, lying farthest from the craton. Also, **PRIMARY ARC**.

Internist *Medicine*. a specialist in internal medicine; a physician who specializes in the diagnosis and medical (as distinguished from surgical or obstetric) treatment of diseases of adults.

Internodal *Anatomy*. situated or occurring between two nodes.

Internode of Ranvier *Neurology*. that portion of a nerve fiber which is located between two nodes of Ranvier.

Internuclear *Science*. situated between the nuclei of cells or atoms.

Internuclear distance *Physical Chemistry*. the space between two nuclei in a molecule.

Internuncial *Neurology*. functioning in a connector between nerve cells or nerve centers, as interneurons in a neural chain.

Internuncial neuron *Neurology*. an association neuron that connects sensory and motor neurons in the spinal cord.

Interocclusal *Anatomy*. situated between the occlusal surfaces of opposing teeth.

Interoreceptor *Physiology*. receptors, located in the viscera, that receive stimuli connected with internal body organ activities such as digestion, excretion, circulation, hunger, thirst, and sexual feelings.

Interocular [in 'tər ək 'yə lər] *Anatomy*. between the eyes.

Interocular distance *Anatomy*. the distance between the eyes, usually measured as the distance between the pupils of the eyes.

Interoffice trunk *Telecommunications*. a trunk connected between two central offices.

Interoperability *Military Science*. the capability of military systems, units, or forces to provide services to and accept services from other military systems, units, or forces, and to use the services exchanged to enable them to operate effectively together.

Interorbital *Anatomy*. located between the eye sockets.

occlusion

1498

oceanographic submersible

oceanog

occlusion [ə kloo'zhən] the fact of closing or blocking off; specific uses include: *Anatomy*. an obstruction of a passage or vessel. *Medicine*. any contact between the incising or masticating surfaces of the upper and lower teeth. *Physiology*. the reduction in muscle tension when two or more afferent nerves sharing certain motor neurons are stimulated simultaneously, as opposed to the sum of the muscle tension when the nerves are stimulated separately. *Physics*. a process in which gas or liquid is trapped on the surface or within a solid mass.

occlusion bodies *Virology*. the large intracellular proteinaceous crystals in which virions are embedded.

occult [ə kult'] *Medicine*. describing a condition that is hidden from view or difficult to detect.

occultation *Astronomy*. 1. a partial or complete eclipse of a star or planet by the moon. 2. the passage of one celestial body in front of another, thereby hiding one body from view.

occult blood *Pathology*. a plasma occurring in feces in such minuscule amounts that its existence can only be detected by microscopic or spectroscopic examination.

occult hydrocephalus *Medicine*. hydrocephalus that produces no abnormal physical signs or symptoms.

occluding disk *Optics*. a small disk used in a telescope to block the view of a bright object in order to allow observation of a fainter one. Similarly, **occluding bar**.

occluding light *Navigation*. a lighted aid to navigation that eclipses at regular intervals so that the period of light is greater than the period of darkness.

occult mineral *Mineralogy*. a mineral that is expected to be present in a rock, perhaps from the evidence of chemical analysis, but that is not found there.

occult virus *Virology*. any virus causing an infection that does not produce symptoms. Also, LATENT VIRUS.

occupational acne *Medicine*. acne due to exposure to chlorinated hydrocarbons, tars, oils, or other irritating substances in a workplace.

occupational disease *Medicine*. any disease resulting from a specific job or workplace, usually caused by effects of long-term exposure to certain substances or by continuous or repetitive physical acts; this may include both physical and mental illnesses.

occupational hazard *Industrial Engineering*. a risk or danger that is inherent in a particular occupation; e.g., exposure to coal dust in coal mining.

occupational medicine *Medicine*. a branch of medicine concerned with the prevention of disease and injury among people at work; such prevention might include matching an individual's characteristics to certain kinds of work, or finding and controlling on-the-job hazards. Also, **industrial medicine**.

occupational neurosis *Psychology*. a neurotic reaction to one's own job, resulting in anxiety and physical symptoms that impede one's ability to continue to work.

occupational therapy *Medicine*. the use of avocational or vocational tasks as a form of therapy or rehabilitation.

occupation density *Transportation Engineering*. the available space per person in a station or vehicle.

occupation layer *Archaeology*. a layer in which an original deposit is preserved as it existed when the site was abandoned.

occupation span *Archaeology*. the time period during which a site is occupied.

occupation surface *Archaeology*. any surface used for human activities, such as a room floor, a stairway, or a walkway. Also, **occupation floor**.

occupied bandwidth *Telecommunications*. the frequency bandwidth such that, below its lowest and above its highest frequency range, the mean powers transmitted are each equal to 0.5% of the total mean power transmitted.

occupied territory *Military Science*. territory under the authority and effective control of a belligerent armed force; not applied to territory administered according to treaties and other civil agreements.

ocean *Geography*. 1. the great body of sea water that covers two-thirds of the earth's surface and surrounds all of its dry land; the sea. 2. any of the four main subdivisions of this great ocean: Pacific, Atlantic, Indian, and Arctic. The southern portions of the first three, which converge around Antarctica, are known collectively as the Antarctic Ocean.

ocean basin *Geology*. a depression on the surface of the lithosphere occupied by an ocean.

ocean circulation *Oceanography*. the large-scale movement of water in an ocean, usually in a closed, circular gyre.

ocean current *Oceanography*. a movement of ocean water that follows a more or less definite pattern, usually moving in a continuous flow but sometimes undergoing marked cyclical changes.

ocean floor *Geology*. the surface of the ocean basin.

ocean-floor spreading see SEA-FLOOR SPREADING.

Oceanian *Ecology*. the Polynesian zoogeographic subregion.

oceanic *Oceanography*. of or relating to the ocean: an *oceanic species*. *Geology*. of or relating to the areas of the ocean deeper than the littoral and neritic zones and beyond the epicontinental zone.

oceanic anticyclone see SUBTROPICAL HIGH.

oceanic basalt *Petrology*. the basalt rock occurring in the vicinity of oceanic island volcanoes.

oceanic climate see MARINE CLIMATE.

oceanic crust *Geology*. the thick mass of igneous rock that underlies the ocean basins, as distinguished from continental crust.

oceanic heat flow *Geophysics*. the average flow of heat from inside the earth through the oceanic crust, measured in microcalories per square centimeter per second.

oceanic high see SUBTROPICAL HIGH.

oceanic island *Geology*. an island that rises from the deep-sea floor.

oceanicity [ō'shə nīs'ə tē] *Meteorology*. a description of the specific extent to which the climate of an area is influenced by the ocean.

oceanic rise *Geology*. a long, broad elevation of the ocean bottom.

oceanic trench *Geology*. see TRENCH, def. 3.

oceanic zone *Oceanography*. the biogeographic region of the open sea, as distinguished from that of the epicontinental zone.

oceanite *Petrology*. a picritic basalt with at least 50% olivine and a lesser amount of plagioclase.

oceanity see OCEANICITY.

oceanization *Geology*. a process by which continental crust is transformed into oceanic crust.

oceanodromous *Vertebrate Zoology*. of or relating to marine fish that are migratory.

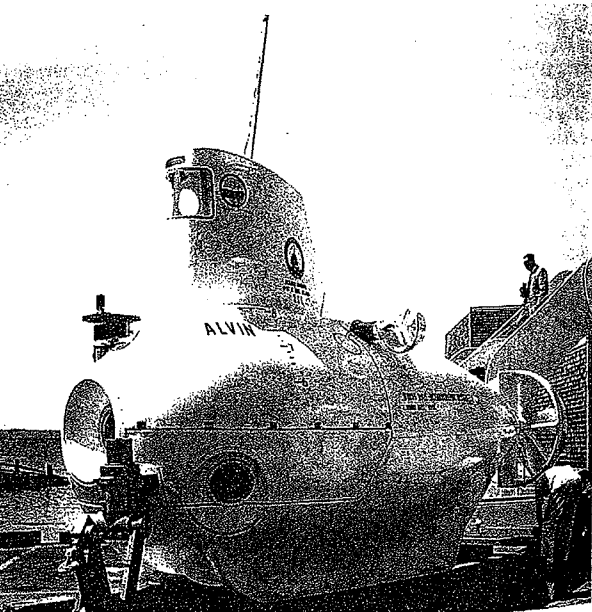
oceanographer [ō'shə nāg'rə fər] a person who specializes in or studies oceanography.

oceanographic or **oceanographical** relating to the scientific study of the ocean. Thus, **oceanographic survey**, **oceanographic research**.

oceanographic equator *Oceanography*. the zone of maximum surface water temperature (generally above 28°C) of the ocean, generally lying above the equator, but lying slightly below the equator during the summer in the Indian Ocean, the Western Pacific, and the Western Atlantic.

oceanographic model *Oceanography*. a hypothetical representation of a given type of marine environment.

oceanographic submersible *Naval Architecture*. a small submarine or submersible vessel designed for use in oceanographic research.



oceanographic submersible

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copia element

copia element *Molecular Biology*. any of the transposable DNA elements in the genetic material of *Drosophila*, existing as a family of closely related base sequences.

copiapite *Mineralogy*. $\text{Fe}^{+2}\text{Fe}^{+3}(\text{SO}_4)_6(\text{OH})_2 \cdot 20\text{H}_2\text{O}$, a transparent to translucent yellow triclinic mineral occurring as thin tabular crystals and loose aggregates, having a specific gravity of 2.08 to 2.17 and a hardness of 2.5 to 3 on the Mohs scale; a secondary mineral formed by the oxidation of pyrite and other sulfides.

coping *Building Engineering*. brickwork having an end oriented and shaped to fit with a particular molding. *Architecture*. a cap or cover for a wall or chimney, often double-sloping and cut with a drip to shed water. *Mechanical Engineering*. the process of shaping or polishing stone with a grinding wheel. *Mining Engineering*. the process of splitting a stone by driving wedges into it. *Psychology*. the conscious or unconscious efforts of an individual to deal with the stresses and demands of his or her environment. Also, **coping behavior**.

coping machine *Mechanical Devices*. a device used to cut away flanges and corners of beams.

coping strategy or **strategies** *Behavior*. the behavioral and emotional adjustments that an individual makes in order to manage or alleviate a stressful situation. Also, **coping mechanism(s)**.

coplanar [kō plān'ār] *Mechanics*. lying or acting in the same plane.

coplanar electrodes *Electronics*. a set of two or more electrodes that are physically aligned with each other.

Copodontidae *Paleontology*. a family of primitive holocephalic fish in the extinct order Copodontiformes; may have had only one functional tooth in each jaw; Devonian and Carboniferous.

copolymer [kō pāl'i mār] *Materials Science*. a polymer that is composed of polymer chains made up of two or more chemically different repeating units that can be in different sequences. *Organic Chemistry*. any polymer produced by the simultaneous polymerization of two or more dissimilar monomers.

copolymerization *Materials Science*. polymerization in which polymers are derived from more than one species of monomers.

copolymerize *Organic Chemistry*. to produce a copolymer; carry out the process of copolymerization.

COPP *Oncology*. an acronym for a chemotherapy regimen for cancer treatment that includes the drugs cyclophosphamide, Qncovin, procarbazine, and prednisone.

copper *Chemistry*. an element having the symbol Cu, the atomic number 29, an atomic weight of 63.54, a melting point of 1083°C, and a boiling point of 2595°C; a soft, reddish, ductile metal that is an excellent conductor of electricity; it has low reactivity and resists atmospheric corrosion by forming a protective cover of a green basic copper carbonate, e.g., $\text{Cu}(\text{OH})_2 \cdot \text{CuCO}_3$. *Mineralogy*. Cu, the mineral form of this element, occurring as cubes, dodecahedra, and tetrahedra; the crystals are often elongated, flattened, or wirelike. It has a specific gravity of 8.94 to 8.95 and a hardness of 2.5 to 3 on the Mohs scale, and it is found in oxidized zones of copper-bearing sulfide ore deposits. Copper has great industrial significance in its pure state or as a base for numerous alloys such as brass and bronze. (Going back to a phrase meaning "metal of Cyprus"; from the most noted early source of this element.)

copper-64 *Nuclear Physics*. a radioactive isotope of copper with a half-life of 12.7 hours that is created by irradiating metallic copper in a reactor; commonly used as a tracer to study diffusion, corrosion, and friction in metals and alloys.

Copper Age *Archaeology*. an intermediate period between the Neolithic and the Bronze Ages, characterized by the use of copper tools. Also, CHALCOLITHIC.

copper alloy *Metallurgy*. an alloy that contains at least 50% copper.

copper amalgam *Metallurgy*. an alloy of copper and mercury.

copper arsenate see CUPRIC ARSENATE.

copper blight *Plant Pathology*. a disease of tea plants caused by the fungus *Guignardia comelliae* that is characterized by well-defined discolored spots on the leaves.

copper blue see MOUNTAIN BLUE.

copper brazing *Metallurgy*. the process of brazing or braze welding with a copper-base filler.

copper bromide 1. see CUPRIC BROMIDE. 2. see CUPROUS BROMIDE.

copper cable *Electricity*. a set of copper wires, used as an alternative to a single large-diameter wire for increased flexibility.

copper carbonate see CUPRIC CARBONATE.

copper chloride 1. see CUPRIC CHLORIDE. 2. see CUPROUS CHLORIDE.

copper chromate or **basic copper chromate** see CUPRIC CHROMATE.

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copper powder

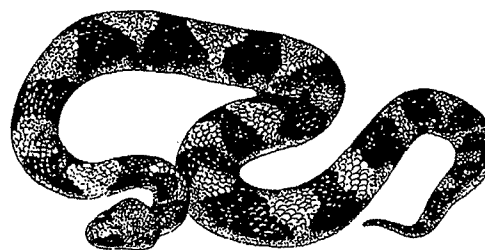
copper converter *Metallurgy*. a converter used to refine impure copper.

copper cyanide see CUPRIC CYANIDE.

copper dish gum *Chemical Engineering*. a test procedure yielding the milligrams of gum in 100 milliliters of gasoline evaporated in a polished copper dish under controlled conditions.

copper fluoride 1. see CUPRIC FLUORIDE. 2. see CUPROUS FLUORIDE.

copper gluconate *Organic Chemistry*. $\text{Cu}[\text{CH}_2\text{OH}(\text{CHOH})_4\text{COO}]_2$, a light-blue, fine, crystalline powder; soluble in water and insoluble in alcohol; used as a feed additive, dietary supplement, and mouth deodorant. Also, CUPRIC GLUCONATE.



copperhead

copperhead *Vertebrate Zoology*. a poisonous pit viper belonging to the family Crotalidae, found in the eastern U.S. and characterized by its copper-colored head. *Materials Science*. a pattern of reddish-brown spots that sometimes appears in the groundcoat during vitreous enameling; the spots are exposed areas of oxidized base metal.

Copperhead *Ordnance*. a gun-launched guided projectile that homes in on a target illuminated by a laser designator beam. Also, CANNON-LAUNCHED GUIDED PROJECTILE.

copper hydroxide or **copper hydrate** see CUPRIC HYDROXIDE.

coppering *Ordnance*. an accumulation of metal in the bore of a gun or firearm caused by repeated firing; it is deposited by the rotating bands or jackets of the projectiles.

copper line *Toxicology*. a green or purplish line that develops between the teeth and gums in patients with copper poisoning. Also, CORRIGAN'S SIGN.

copper loss *Electricity*. the power loss in the winding of an electromagnetic machine due to resistance.

copper monoxide see CUPRIC OXIDE.

copper nitrate see CUPRIC NITRATE.

copper number *Analytical Chemistry*. the number of milligrams of copper produced by the reduction of Benedict's or Fehling's solution by 1 gram of a carbohydrate.

copper oleate *Organic Chemistry*. $\text{Cu}(\text{C}_{17}\text{H}_{33}\text{COO})_2$, a combustible, brown powder or greenish-blue mass, insoluble in water and slightly soluble in alcohol; used as a fungicide, insecticide, emulsifying agent, and catalyst. Also, CUPRIC OLEATE.

copper ore *Geology*. any rock from which copper can be extracted economically.

copper oxide 1. see CUPRIC OXIDE. 2. see CUPROUS OXIDE.

copper oxide black see CUPRIC OXIDE.

copper oxide photovoltaic cell *Electronics*. an early type of nonvacuum photovoltaic cell that generates a small voltage between the substrate and the conducting layer when exposed to light; its active element is of a layer of copper oxide in contact with a layer of metallic copper.

copper oxide rectifier or **copper oxide diode** *Electronics*. a semiconductor rectifier in which the rectifying barrier is formed by a junction of copper and cuprous oxide.

copper oxide red see CUPROUS OXIDE.

copper plate *Mining Engineering*. see APRON, def. 2.

copperplate engraving *Graphic Arts*. 1. a printing method, common in the 18th and 19th centuries, in which characters and illustrations are directly cut into a thin copper printing plate. 2. a print made from such a plate.

copper plating *Metallurgy*. electrochemical or electroless plating of essentially pure copper onto a substrate.

copper powder *Metallurgy*. particulate copper, which is used extensively in powder metallurgy for the fabrication of copper-base components as well as iron-base, copper-infiltrated components, and also in microelectronic applications.